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## AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

## **Listing of Claims:**

1. (currently amended) A compound of Formula (I):

$$\begin{array}{c|c}
R_4 & & \\
R_5 & & \\
R_6 & & \\
\end{array}$$
(I)

wherein:

R<sub>1</sub> is H or C<sub>1-8</sub> alkyl;

 $R_2$  is  $C_{2-4}$  alkenyl,  $C_{1-4}$  alkyl or  $C_{1-4}$  haloalkyl; and

 $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$  and  $R_7$  are each independently H,  $C_{1-4}$  acyl,  $C_{1-4}$  acyloxy,  $C_{1-4}$  acylthioxy,  $C_{2-4}$  alkenyl,  $C_{1-4}$  alkoxy,  $C_{1-4}$  alkyl,  $C_{1-4}$  alkylcarboxamido,  $C_{1-4}$  alkylsulfinyl,  $C_{1-4}$  alkylsulfonamide,  $C_{1-4}$  alkylsulfonyl,  $C_{1-4}$  alkylthio, amino,  $C_{1-4}$  alkylamino, carbo- $C_{1-4}$ -alkoxy, carboxamide, cyano,  $C_{2-6}$  dialkylamino,  $C_{1-4}$  haloalkoxy,  $C_{1-4}$  haloalkylsulfinyl,  $C_{1-4}$  haloalkylsulfonyl,  $C_{1-4}$  haloalkylsulfonyl, halogen, hydroxyl, phenyl, and thiol; or

a pharmaceutically acceptable salt, hydrate and solvate thereof;

provided that the compound is not 1-(4-Chloro-phenyl)-2-methyl-piperazine; 1-(3,5-Difluoro-phenyl)-2-methyl-piperazine; 2-Methyl-1-(2-methylsulfanyl-phenyl)-piperazine; 4-Amino-3-fluoro-2-(2-methyl-piperazin-1-yl)-5-nitro-benzonitrile; 2-Methyl-1-phenyl-piperazine; 4-(2-Isopropyl-piperazin-1-yl)-2-trifluoromethyl-benzonitrile; 4-(2-Ethyl-piperazin-1-yl)-2-trifluoromethyl-benzonitrile; 4-(2-Methyl-piperazin-1-yl)-2-methyl-piperazine; 2-Methyl-1-m-tolyl-piperazine; 4-(2-Methyl-piperazin-1-yl)-benzamide; 1-(2-Fluoro-phenyl)-2-methyl-piperazine; 4-(2-Methyl-piperazin-1-yl)-phenol; 1-(3-Methoxy-piperazine) 4-(2-Methyl-piperazin-1-yl)-phenol; 1-(3-Methoxy-piperazine) 4-(2-Methyl-piperazin-1-yl)-phenol; 1-(3-Methoxy-piperazin-1-yl)-phenol; 1-(3-Met

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phenyl)-2-methyl-piperazine; 2-Methyl-1-(3-trifluoromethyl-phenyl)-piperazine; 1-(4-Methoxy-phenyl)-2-methyl-piperazine; 2-Methyl-1-p-tolyl-piperazine; 2,4-Dimethyl-1-phenyl-piperazine; 4-Chloro-5-(4-ethyl-2-methyl-piperazin-1-yl)-benzene-1,2-diamine; 4-Chloro-5-(4-ethyl-2-methyl-piperazin-1-yl)-2-nitro-phenylamine; 5-(4-Ethyl-2-methyl-piperazin-1-yl)-2-nitro-4-trifluoromethyl-phenylamine; and 5-(4-Ethyl-2-methyl-piperazin-1-yl)-4-methyl-2-nitro-phenylamine.

- 2. (Original) The compound according to claim 1 wherein  $R_1$  is H.
- 3. (Original) The compound according to claim 1 wherein  $R_1$  is  $C_{1-8}$  alkyl.
- 4-8. (Canceled).
- 9. (Previously presented) The compound according to claim 1 wherein  $R_2$  is  $C_{2-4}$  alkenyl.
- 10. (Canceled).
- 11. (Previously presented) The compound according to claim 1 wherein  $R_2$  is  $C_{1-4}$  alkyl.
- 12. (Previously presented) The compound according to claim 1 wherein  $R_2$  is methyl.
- 13-16. (Canceled).
- 17. (Previously presented) The compound according to claim 1 wherein R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub> are each independently selected from the group consisting of H, C<sub>1-4</sub> alkoxy, C<sub>1-4</sub> alkyl, cyano, C<sub>1-4</sub> haloalkoxy, C<sub>1-4</sub> haloalkyl and halogen.
- 18. (Canceled).

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19. (Original) The compound according to claim 17 wherein R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub> are each independently selected from the group consisting of H, C<sub>1-4</sub> haloalkoxy, C<sub>1-4</sub> haloalkyl and halogen.

- 20. (Original) The compound according to claim 17 wherein R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub> are each independently selected from the group consisting of H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, cyano, OCF<sub>3</sub>, CF<sub>3</sub>, F, Cl and Br.
- 21. (Original) The compound according to claim 17 wherein R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub> are each independently selected from the group consisting of H, CF<sub>3</sub>, F, Cl and Br.
- 22. (Previously presented) The compound according to claim 1 wherein R<sub>3</sub> is H or F.
- 23. (Previously presented) The compound according to claim 1 wherein R<sub>4</sub> is selected from the group consisting of H, cyano, F, Cl and Br.
- 24. (Previously presented) The compound according to claim 1 wherein R<sub>5</sub> is selected from the group consisting of H, CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, OCF<sub>3</sub>, CF<sub>3</sub>, F, Cl and Br.
- 25. (Previously presented) The compound according to claim 1 wherein R<sub>6</sub> is selected from the group consisting of H, F, Cl and Br.
- 26. (Previously presented) The compound according to claim 1 wherein R<sub>7</sub> is selected from the group consisting of H, CH<sub>3</sub>, F, Cl and Br.
- 27. (Original) The compound of claim 1 selected from the group consisting of:

1-(2,3-Difluoro-phenyl)-2-ethyl-piperazine;

1-(3-Fluoro-phenyl)-2-ethyl-piperazine;

1-(4-Fluoro-phenyl)-2-ethyl-piperazine;

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(R)-1-(3-Chloro-4-fluoro-phenyl)-2-methyl-piperazine;

(S)-1-(3-Chloro-4-fluoro-phenyl)-2-methyl-piperazine;

(R)-1-(3,4-Difluoro-phenyl)-2-methyl-piperazine;

(S)-1-(3,4-Difluoro-phenyl)-2-methyl-piperazine;

(R)-1-(3-Chloro-2-fluoro-phenyl)-2-methyl-piperazine;

(S)-1-(3-Chloro-2-fluoro-phenyl)-2-methyl-piperazine;

(R)-1-(4-Fluoro-phenyl)-2-methyl-piperazine;

(S)-1-(4-Fluoro-phenyl)-2-methyl-piperazine;

(R)-1-(3,4-Dichloro-phenyl)-2-methyl-piperazine;

(S)-1-(3,4-Dichloro-phenyl)-2-methyl-piperazine;

(R)-1-(3-Chloro-4-methyl-phenyl)-2-methyl-piperazine;

(S)-1-(3-Chloro-4-methyl-phenyl)-2-methyl-piperazine;

(R)-1-(3,4-Difluoro-phenyl)-2-methyl-piperazine;

(S)-1-(3,4-Difluoro-phenyl)-2-methyl-piperazine;

(R)-1-(3,5-Dichloro-phenyl)-2-methyl-piperazine;

(S)-1-(3,5-Dichloro-phenyl)-2-methyl-piperazine;

(R)-1-(2,5-Difluoro-phenyl)-2-methyl-piperazine;

(S)-1-(2,5-Difluoro-phenyl)-2-methyl-piperazine;

(R)-1-(4-Chloro-3-fluoro-phenyl)-2-methyl-piperazine;

(S)-1-(4-Chloro-3-fluoro-phenyl)-2-methyl-piperazine;

(R)-1-(3-Chloro-2-methyl-phenyl)-2-methyl-piperazine;

(S)-1-(3-Chloro-2-methyl-phenyl)-2-methyl-piperazine;

(R)-1-(5-Chloro-2-fluoro-phenyl)-2-methyl-piperazine;

(S)-1-(5-Chloro-2-fluoro-phenyl)-2-methyl-piperazine;

(R)-1-(5-Chloro-2-methyl-phenyl)-2-methyl-piperazine;

(S)-1-(5-Chloro-2-methyl-phenyl)-2-methyl-piperazine;

1-(3-Chloro-4-fluoro-phenyl)-2-ethyl-piperazine;

1-(3-Chloro-phenyl)-2-ethyl-piperazine;

1-(4-Chloro-phenyl)-2-ethyl-piperazine;

1-(3,4-Difluoro-phenyl)-2-ethyl-piperazine and

(R)-1-(5-Chloro-2-fluoro-phenyl)-2-ethyl-piperazine;

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or a pharmaceutically acceptable salt, hydrate and solvate thereof.

28. (Original) The compound of claim 1 selected from the group consisting of:

- (R)-1-(2-Fluoro-5-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (S)-1-(2-Fluoro-5-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (R)-1-(4-Chloro-2-fluoro-phenyl)-2-methyl-piperazine;
- (S)-1-(4-Chloro-2-fluoro-phenyl)-2-methyl-piperazine;
- (R)-1-(3-Chloro-5-fluoro-phenyl)-2-methyl-piperazine;
- (S)-1-(3-Chloro-5-fluoro-phenyl)-2-methyl-piperazine;
- (R)-1-(3-Fluoro-phenyl)-2-methyl-piperazine;
- (S)-1-(3-Fluoro-phenyl)-2-methyl-piperazine;
- (R)-1-(2-Fluoro-4-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (S)-1-(2-Fluoro-4-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (R)-1-(2-Chloro-3-fluoro-phenyl)-2-methyl-piperazine;
- (S)-1-(2-Chloro-3-fluoro-phenyl)-2-methyl-piperazine;
- (R)-1-(2-Fluoro-5-methyl-phenyl)-2-methyl-piperazine;
- (S)-1-(2-Fluoro-5-methyl-phenyl)-2-methyl-piperazine;
- (R)-1-(4-Fluoro-biphenyl-3-yl)-2-methyl-piperazine;
- (S)-1-(4-Fluoro-biphenyl-3-yl)-2-methyl-piperazine;
- (R)-1-(2,5-Difluoro-4-methoxy-phenyl)-2-methyl-piperazine;
- (S)-1-(2,5-Difluoro-4-methoxy-phenyl)-2-methyl-piperazine;
- (R)-1-(2-Fluoro-4-methyl-phenyl)-2-methyl-piperazine;
- (S)-1-(2-Fluoro-4-methyl-phenyl)-2-methyl-piperazine;
- (R)-1-(2-Chloro-5-fluoro-phenyl)-2-methyl-piperazine;
- (S)-1-(2-Chloro-5-fluoro-phenyl)-2-methyl-piperazine;
- (R)-1-(2-Chloro-4-fluoro-phenyl)-2-methyl-piperazine;
- (S)-1-(2-Chloro-4-fluoro-phenyl)-2-methyl-piperazine;
- (R)-1-(2,4-Dichloro-phenyl)-2-methyl-piperazine;
- (S)-1-(2,4-Dichloro-phenyl)-2-methyl-piperazine;
- (R)-1-(2,5-Dichloro-phenyl)-2-methyl-piperazine;
- (S)-1-(2,5-Dichloro-phenyl)-2-methyl-piperazine;

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(R)-1-(3,5-Bis-trifluoromethyl-phenyl)-2-methyl-piperazine;

- (S)-1-(3,5-Bis-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (R)-1-(4-Fluoro-2-methyl-phenyl)-2-methyl-piperazine;
- (S)-1-(4-Fluoro-2-methyl-phenyl)-2-methyl-piperazine;
- (R)-1-(2-Chloro-phenyl)-2-methyl-piperazine;
- (S)-1-(2-Chloro-phenyl)-2-methyl-piperazine;
- (R)-1-(2,3-Dichloro-phenyl)-2-methyl-piperazine;
- (R)-1-(2,3-Dichloro-phenyl)-2-methyl-piperazine;
- (R)-1-(2,6-Dichloro-phenyl)-2-methyl-piperazine;
- (R)-1-(2,6-Dichloro-phenyl)-2-methyl-piperazine;
- (R)-1-(2-Chloro-5-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (R)-1-(2-Chloro-5-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (R)-2-Methyl-1-(4-trifluoromethyl-phenyl)-piperazine;
- (S)-2-Methyl-1-(4-trifluoromethyl-phenyl)-piperazine;
- (R)-1-(2-Fluoro-3-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (S)-1-(2-Fluoro-3-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (R)-1-(3-Fluoro-5-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (R)-1-(3-Fluoro-5-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (R)-1-(4-Chloro-3-trifluoromethyl-phenyl)-2-methyl-piperazine;
- (S)-1-(4-Chloro-3-trifluoromethyl-phenyl)-2-methyl-piperazine; and
- (R)-2,4-Dimethyl-1-(3-trifluoromethyl-phenyl)-piperazine;

or a pharmaceutically acceptable salt, hydrate and solvate thereof.

- 29. (Original) The compound of claim 1 selected from the group consisting of:
  - 1-(2-Bromo-phenyl)-2-vinyl-piperazine;
  - 1-(4-Chloro-phenyl)-2-vinyl-piperazine;
  - 1-(3-Fluoro-phenyl)-2-vinyl-piperazine;
  - 1-(3-Chloro-4-fluoro-phenyl)-2-vinyl-piperazine;
  - 1-(3-Chloro-phenyl)-2-vinyl-piperazine;
  - 1-(3-Bromo-phenyl)-2-vinyl-piperazine;
  - 1-(3,5-Dichloro-phenyl)-2-vinyl-piperazine;

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1-(2-Bromo-4-isopropyl-phenyl)-2-vinyl-piperazine;

1-(2-Bromo-4-trifluoromethoxy-phenyl)-2-vinyl-piperazine;

1-(2-Bromo-4-trifluoromethyl-phenyl)-2-vinyl-piperazine;

3-(2-Vinyl-piperazin-1-yl)-benzonitrile;

1-(3,5-Difluoro-phenyl)-2-vinyl-piperazine;

1-o-Tolyl-2-vinyl-piperazine and

1-(2,3-Difluoro-phenyl)-2-vinyl-piperazine;

or a pharmaceutically acceptable salt, hydrate and solvate thereof.

- 30. (Previously presented) The compound according to claim 1 wherein said compound is an *R* enantiomer.
- 31. (Previously presented) The compound according to claim 1 wherein said compound is an S enantiomer.
- 32. (Original) A pharmaceutical composition comprising a pharmaceutical acceptable carrier in combination with at least one compound according to Formula (I):

$$\begin{array}{c|c}
R_{3} & N & R_{1} \\
R_{5} & R_{7} & R_{2} \\
\hline
(I) & & & \\
\end{array}$$

wherein:

 $R_1$  is H or  $C_{1-8}$  alkyl;

 $R_2$  is  $C_{2-4}$  alkenyl,  $C_{1-4}$  alkyl or  $C_{1-4}$  haloalkyl; and

R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub> are each independently H, C<sub>1-4</sub> acyl, C<sub>1-4</sub> acyloxy, C<sub>1-4</sub> acylthioxy, C<sub>2-4</sub> alkenyl, C<sub>1-4</sub> alkoxy, C<sub>1-4</sub> alkyl, C<sub>1-4</sub> alkylcarboxamido, C<sub>1-4</sub> alkylsulfinyl, C<sub>1-4</sub> alkylsulfonamide, C<sub>1-4</sub> alkylsulfonyl, C<sub>1-4</sub> alkylthio, amino, C<sub>1-4</sub> alkylamino, carbo-C<sub>1-4</sub>-alkoxy, carboxamide, cyano, C<sub>2-6</sub> dialkylamino, C<sub>1-4</sub> haloalkoxy, C<sub>1-4</sub> haloalkyl, C<sub>1-4</sub>

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haloalkylsulfinyl,  $C_{1-4}$  haloalkylsulfonyl,  $C_{1-4}$  haloalkylthio, halogen, hydroxyl, phenyl, and thiol; or

a pharmaceutically acceptable salt, hydrate and solvate thereof.

- 33. (Previously presented) A method of modulating a 5HT<sub>2C</sub> receptor comprising contacting said receptor with a therapeutically effective amount of a compound as in claim 1.
- 34. (Original) The method according to claim 33 wherein said compound is an agonist of said receptor.
- 35. (Previously presented) A method of prophylaxis or treatment of disorders of the central nervous system; damage to the central nervous system; cardiovascular disorders; gastrointestinal disorders; diabetes insipidus or sleep apnea comprising administering to an individual in need of such prophylaxis or treatment a therapeutically effective amount of a compound according to claim 1 or a pharmaceutical composition according to claim 32.
- 36. (Currently amended) The method according to claim 35 wherein the disorders of the central nervous system are selected the group consisting of depression, atypical depression, bipolar disorders, anxiety disorders, obsessive-compulsive disorders, social phobias or panic states, sleep disorders, sexual dysfunction, psychoses, schizophrenia, migraine and other conditions associated with cephalic pain or other pain, raised intracranial pressure, epilepsy, personality disorders, Alzheimer disease, age-related behavioral disorders, behavioral disorders associated with dementia, organic mental disorders, mental disorders in childhood, aggressivity, age-related memory disorders, chronic fatigue syndrome, drug addiction, and alcohol addiction, obesity, bulimia, anorexia nervosa and premenstrual tension.
- 37. (Original) The method according to claim 36 wherein the disorder of the central nervous system is obesity.

Applicant: Brian Smith, et al. Attorney's Docket No.: 20750-044US1 / 068.US2.PCT Serial No.: 10/561,101 Filed : December 16, 2005 Page : 10 of 32 38. (Canceled). 39. (Original) The method according to claim 36 wherein the sexual dysfunction is Male erectile dysfunction. 40-44. (Canceled). 45. (Currently amended) The method according to claim 37 or 39 wherein said individual is a human. 46. (Previously presented) A method of decreasing food intake of an individual comprising administering to said individual a therapeutically effective amount of a compound according to claim 1 or a pharmaceutical composition according to claim 32. 47. (Canceled). 48. (Previously presented) The method according to claim 46 wherein said individual is a human. 49. (Previously presented) A method of inducing satiety in an individual comprising administering to said individual a therapeutically effective amount of a compound according to claim 1 or a

(Previously presented) The method according to claim 49 wherein said individual is a human.

pharmaceutical composition according to claim 32.

50.

51.

(Canceled).

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52. (Previously presented) A method of controlling weight gain of an individual comprising administering to said individual suffering from weight control a therapeutically effective amount of a compound according to claim 1 or a pharmaceutical composition according to claim 32.

- 53. (Canceled).
- 54. (Previously presented) The method according to claim 52 wherein said individual is a human.
- 55-58. (Canceled).
- 59. (Previously presented) A method of producing a pharmaceutical composition comprising admixing at least one compound according to claim 1 and a pharmaceutically acceptable carrier.
- 60-78. (Canceled).
- 79. (Previously presented) The compound according to claim 1 wherein:

 $R_1$  is H, methyl, ethyl, *n*-propyl, *iso*-propyl or *n*-butyl;

 $R_2$  is a vinyl, methyl, ethyl, n-propyl,  $C_{1-4}$  haloalkyl or -CF<sub>3</sub>;

R<sub>3</sub> is H or F;

R<sub>4</sub> is selected from the group consisting of H, cyano, F, Cl and Br;

R<sub>5</sub> is selected from the group consisting of H, CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, OCF<sub>3</sub>, CF<sub>3</sub>, F, Cl and Br;

R<sub>6</sub> is selected from the group consisting of H, F, Cl and Br; and

R<sub>7</sub> is selected from the group consisting of H, CH<sub>3</sub>, F, Cl and Br.

80. (Previously presented) A method of treating a 5HT<sub>2C</sub> receptor associated disorder comprising administering to an individual in need of such treatment an effective amount of a compound according to claim 1, or a pharmaceutical composition according to claim 32.

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81. (New) A method of treating obesity comprising administering to an individual in need of such treatment an effective amount of a compound according to claim 1, or a pharmaceutical composition according to claim 32.

- 82. (New) A method of treating depression comprising administering to an individual in need of such treatment an effective amount of a compound according to claim 1, or a pharmaceutical composition according to claim 32.
- 83. (New) The method according to claim 39 wherein said individual is a human.